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The File: Contract No: ND-193, T.O. 20

30 September 1961

[REDACTED]

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Trip Report - RS-24 Agent Set

[REDACTED]

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1. Project Description:

This task provides for an applied research program to design and develop several noise or noise like modulation techniques for a highly redundant wide band communications system. The various techniques will be field tested to determine their ability to provide protection against interception or detection, multipath or selective fading and intentional or unintentional jamming.

2. Contractual Information:

- a. Initial Cost: \$330,831
- b. Initiation Date: 24 May 1960
- c. Completion Date: 24 August 1961
- d. Deliverable Items: Final Report

Extension: 30 November 1961

3. Date of Meeting: 21 September 1961

4. Place of Meeting: Los Angeles, California

5. Persons Attending:

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Agency

Non-Agency

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6. Contractor's Performance:

- a. On Schedule and Expected to Remain So: No
- b. Within Obligated Funds and Expected to Remain So: No
- c. Satisfactory Technical Progress: Yes

7. Project Status:

1. Under this task three modulation demodulation techniques were studied, digital stored reference system, transmitted reference, and a higher order third moment statistical modulation. After investigation of these techniques and several conferences with the government, it was apparent that due to the complexity in implementation of the latter two techniques, that work should be discontinued therefore only the digital stored reference system was implemented for field testing. After further investigation by the government,

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SUBJECT: Trip Report - ES-24 Agent Set with [REDACTED]

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two versions of the transmitted reference technique, apparently different from the approach by the contractor, were requested to be implemented. In addition, further randomization of the digital stored reference technique was requested to eliminate a burst of recognition signal which has a 1563 cycle tone which can be detected on a narrow band receiver. A proposal was received from the contractor for this purpose.

2. During this visit to the contractor the proposal was reviewed for clarity of several technical points and to review the contractor's reasons for proposing all of the additional work as an increase in scope. His position was that both systems are significantly different than that which was originally proposed. The further randomization was requested after it appeared to the contractor that the use of a short recognition burst without randomization was acceptable to the government. The contractor was informed that further review and discussion would be necessary to determine the action to be taken on their proposal.

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